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Kurt A. Summe, Reg. No. 36,023

PATENT

ATTY. DOCKET NO: DEME-106:-/119

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Kovac et al.

Art Unit:

3732

Serial No.

10/656,490

Examiner:

Not yet assigned

Filed:

September 5, 2003

Title:

APPARATUS AND METHOD FOR CURING MATERIALS

WITH RADIATION

Cincinnati, Ohio

August 31, 2004

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## **INFORMATION DISCLOSURE STATEMENT**

In accordance with the duty of candor and good faith imposed by 37 CFR §1.56 and means of complying therewith according to 37 CFR §§1.97 and 1.98, the references listed on the attached forms PTO-1449 are called to the attention of the U.S. Patent and Trademark Office in connection with the above-identified application.

Subject to the Office's waiver of providing copies of U.S. patents and published applications for applications filed after June 30, 2003, only copies of the "Foreign" and "Other" patent references are provided, since this application was filed on September 5, 2003, and therefore, subsequent to June 30, 2003.

The Examiner is respectfully requested to review each reference cited and to note the review on the attached PTO-1449 forms, and to reach their own independent determination of its materiality, if any.

To the best of Applicant's knowledge and belief, this Information Disclosure Statement is being filed prior to the receipt of a first Office Action on the merits of this case, and therefore, no fees are believed to be due. However, if any charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

Kurt A. Summe, Reg. No. 36,023

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Facsimile: (513) 241-2324

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SERIAL NO. **SUBSTITUTE FORM PTO-1449** U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. PATENT AND TRADEMARK OFFICE 10/656,490 DEME/10C (MODIFIED) **APPLICANT** INFORMATION DISCLOSURE STATEMENT BY APPLICANT Kovac et al. **GROUP FILING DATE** (Use several sheets if necessary) September 5, 2003 3732 (37 CFR 1.98(b)) **U.S. PATENT DOCUMENTS** FILING DATE ISSUE **EXAMINER** IF APPROPRIATE **CLASS SUBCLASS** INITIAL PATENT NUMBER DATE **PATENTEE** 736 02/05/80 128 B.A 6 4 Schlager 2 0 9 9 0 07/01/80 Tsukada et al. B.B 4 2 2 5 10/21/80 B.C 9 6 8 Gonser 2 3 0 4 5 3 10/1980 Reimers 433 29 B.D 2 01/11/80 Scheer et al. 3 3 6 4 9 B.E 2 2 7 7/1981 B.F 4 8 0 3 Vincent 11/1981 504 2 8 0 250 9 8 6 Herold B.G 4 126 438 7 7/1982 3 3 5 9 Popovich et al. B.H 4 5/1983 362 32 B.I 4 3 8 5 3 4 Gonser 5 07/05/83 B.J 4 3 9 1 8 8 Matsui B.K 4 3 9 8 8 8 5 8/1983 Loge et al. 433 126 FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS **TRANSLATION DOCUMENT PUBLICATION COUNTRY OR SUBCLASS** (YES/NO) **PATENT OFFICE CLASS** DATE NUMBER **A61N** 5/06 N/A EP 0 672 435 09/20/95 Europe B.L B.M EO 0 678 282 10/25/95 Europe 05/01/96 Europe N/A B.N EP 0 709 698 EP 0 736 307 10/09/96 Europe **A61N** 5/06 N/A B.O B.P EP 0 740 567 11/06/02 Europe A61N 5/06 N/A 19/00 No (in German) B.Q EP 0 755 662 07/04/96 Europe A61C OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) Eibofner et al., Lighting Fixture for a Medical or Dental Handpiece, US2001/O007739, U.S. Patent Application Publication, B.R published 7/12/O1 B.S . European Search Report, February 27, 2004 Feltzer, A. J. et al., Influence of Light Intensity on Polymerization Shrinkage and Integrity of Restoration-Cavity Interface, B.T Eur. J. Oral Sciences, 103: 322-326, 1995 **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered.

U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. SERIAL NO. SUBSTITUTE FORM PTO-1449 10/656,490 PATENT AND TRADEMARK OFFICE DEME/10C (MODIFIED) INFORMATION DISCLOSURE **APPLICANT** Kovac et al. STATEMENT BY APPLICANT **GROUP** FILING DATE (Use several sheets if necessary) September 5, 2003 3732 (37 CFR 1.98(b)) U.S. PATENT DOCUMENTS FILING DATE ISSUE **EXAMINER** IF APPROPRIATE **SUBCLASS** PATENT NUMBER CLASS DATE **PATENTEE** INITIAL C.A 2 3 10/25/83 Herold et al. 5 05/01/84 8 5 Johnson C.B 4 4 4 8 422 5/22/84 Bussiere et al. 186.3 C.C 4 4 5 0 1 3 9 09/09/86 C.D 4 6 0 6 3 0 **Betush** 229 433 C.E 4 6 6 6 4 0 6 5/1987 Kanca, III 5 7 3 3 5 06/16/87 Nevin C.F 4 3 2 12/29/87 Bussiere et al. C.G 4 7 1 6 9 6 3/1988 Masami et al. 362 235 C.H 4 7 2 9 0 7 6 07/12/88 C.I 7 5 7 3 8 Cooper et al. 1 9 2 6 9 2 12/20/88 Herold et al. C.J 4 7 0 9 3/1989 433 91 4 8 1 Snedden C.K FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS **PUBLICATION COUNTRY OR** TRANSLATION **DOCUMENT** (YES/NO) NUMBER DATE PATENT OFFICE **CLASS SUBCLASS** C.L EP 0 780 101 06/25/97 Europe A61C 7/16 N/A 19/00 No (in German) C.M A61C EP 0 780 103 06/25/97 Europe 03/25/98 C.N EP 0 830 850 Europe 5/02 N/A A61C C.O EP 0 830 851 05/02/02 Europe A61C 5/02 N/A 05/06/02 Europe C.P EP 0 830 852 A61C 19/00 No (in German) C.Q EP 0 879 582 11/25/98 Europe OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) Gemunder et al., Photo Curing Light System Having Modulated Light Intensity Control, US2002/O014864, U.S. Patent C.R Application Publication, published 2/7/O2 Gordon et al., U.S. Patent Application Publication No. US 2002/O133970 A1, Pub. Date: Sep. 26, 2002 C.S Hooker et al., Optical Waveguide Concentrator and Illuminating Device, US20021/O051367, U.S.Patent Application C.T Publication, published 5/2/O2 DATE CONSIDERED **EXAMINER** EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered. Include a copy of this form with next communication to applicant.

SUBSTITUTE FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. 10/656,490 PATENT AND TRADEMARK OFFICE DEME/10C (MODIFIED) **APPLICANT** INFORMATION DISCLOSURE STATEMENT BY APPLICANT Kovac et al. **GROUP FILING DATE** (Use several sheets if necessary) September 5, 2003 3732 (37 CFR 1.98(b)) U.S. PATENT DOCUMENTS **FILING DATE** EXAMINER **ISSUE** IF APPROPRIATE **SUBCLASS** PATENT NUMBER **CLASS** INITIAL DATE **PATENTEE** 6 3 5/1989 Fujimura et al. 433 29 D.A 8 2 4 7 06/06/89 D.B 4 8 3 6 8 2 Gonser 06/13/89 Herold et al. D.C 8 3 9 5 6 6 4 8 6 5 4 6 7/1989 Cuda 350 96.24 D.D 4 4 12/1989 250 504 8 8 9 D.E 4 8 8 4 Bryan 500 D.F 9 3 5 6 6 5 6/1990 Murata 313 4 6/1990 445 24 6 D.G 4 9 3 8 0 8 Lee 08/14/90 D.H 4 9 4 8 2 5 Friedman 10/1990 D.I 9 6 3 7 9 8 McDermott 315 312 D.J 4 9 9 9 3 0 3/1991 Kim 437 51 1 D.K 5 0 0 3 4 3 4 3/1991 Gonser et al. 362 32 FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS **PUBLICATION** COUNTRY OR TRANSLATION DOCUMENT SUBCLASS (YES/NO) **CLASS** NUMBER DATE PATENT OFFICE A61C 19/00 No (in German) EP 0 880 945 12/02/98 D.L Europe 1/08 N/A D.M EP 0 884 025 12/16/98 A61C Europe 1/08 N/A D.N EP 0 885 025 12/16/98 Europe A61C A61C 1/08 No (in German) D.O EP 0 998 880 05/10/00 Europe D.P EP 1 031 326 08/30/O0 Europe A61C 19/00 No (in French) N/A D.Q EP 1 090 607 04/11/01 Europe A61C 19/00 OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) Kanca, III, John and Suh, Byoung I., Pulse Activation: Reducing Resin-Based Composite Contraction Stresses at the D.R Enamel Cavosurface Margins, Am. J. of Dentistry, 12(3), 107-112, 1999 D.S Kato, Hiromasa, Relationship Between the Velocity of Polymerization and Adaptation to Dentin Cavity Wall of Light-Cured Composite, Dental Materials J. 6(1): 32-37, 1987 Koran, Peter and Kurschner, Ralf, Effect of Sequential versus Continuous Irradiation of a Light-Cured Resin Composite on D.T Shsrinkage, Viscosity, Adhesion, and Degree of Polymerization, Am. J. of Dentistry, 11, No. 1, 17-22, 1998 DATE CONSIDERED **EXAMINER** EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered.

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Sheet 6 (F) of 15

SUBSTITUTE FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE ATTY, DOCKET NO. SERIAL NO. 10/656,490 PATENT AND TRADEMARK OFFICE DEME/10C (MODIFIED) **APPLICANT** INFORMATION DISCLOSURE Kovac et al. STATEMENT BY APPLICANT **GROUP FILING DATE** (Use several sheets if necessary) September 5, 2003 3732 (37 CFR 1.98(b)) **U.S. PATENT DOCUMENTS** FILING DATE ISSUE **EXAMINER** IF APPROPRIATE **SUBCLASS** PATENT NUMBER DATE **CLASS** INITIAL **PATENTEE** 08/03/93 Kennedy 320 13 F.A 5 2 3 3 2 8 3 2 09/07/93 Richardson et al. 210 745 F.B 5 2 4 6 0 2 11/1993 228 6.2 2 6 5 7 9 2 Harrah et al. F.C 5 5 2 8 6 2 9 01/11/94 Schlager et al. 356 313 F.D 208.1 2 2/1994 250 5 2 8 5 Imamura F.E 3 4 3/1994 433 29 F.F 2 0 1 6 9 Friedman et al. 5 9 04/12/94 Lansing et al. F.G 5 3 0 2 2 4 2 05/13/94 F.H 5 3 2 4 9 Kennedy 5/31/94 433 29 F.I 5 3 6 7 3 Hare 1 F.J 5 3 2 8 3 6 8 07/12/94 Lansing et al. F.K 5 3 7 1 8 2 6 12/6/94 Friedman 385 115 FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS TRANSLATION DOCUMENT **PUBLICATION COUNTRY OR** PATENT OFFICE SUBCLASS (YES/NO) **CLASS** NUMBER DATE 05/22/02 A61C 19/00 EP 1 206 923 Europe F.L 19/000 No (in German) F.M EP 1 228 738 08/07/02 Europe A61C Great Britain GB 2 212 010 7/1989 F.N GB F.O GB 2 329 756 03/31/99 F.P JP 2 080 522 11/15/99 Japan Abstract only F.Q JP 410033573 02/10/98 Japan A61C01 00 OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) LumiLeds Lighting LLC, <u>Application Bulletin AB XXX</u>, Luxeon™ Data Sheet, Publication No. xxxx-xxxx F.R F.S LumiLeds Lighting LLC, <u>Luxeon™ Power Light Sources of the Future</u>, January 2001 - Mike Holt LumiLeds Lighting LLC, Lumen Maintenance of White Luxeon™ Power Light Sources, Application Brief AB07, LumiLeds F.T Lighting, US LLC **EXAMINER DATE CONSIDERED** EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered.

U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. SUBSTITUTE FORM PTO-1449 10/656,490 DEME/10C PATENT AND TRADEMARK OFFICE (MODIFIED) **APPLICANT** INFORMATION DISCLOSURE STATEMENT BY APPLICANT Kovac et al. **GROUP** FILING DATE (Use several sheets if necessary) September 5, 2003 3732 (37 CFR 1.98(b)) **U.S. PATENT DOCUMENTS** FILING DATE **ISSUE EXAMINER** IF APPROPRIATE PATENT NUMBER **CLASS SUBCLASS** INITIAL DATE **PATENTEE** 3 12/1994 Kondo et al. 174 268 G.A 5 3 5 l٥ 5/30/95 362 119 G.B 4 2 7 6 8 Kennedy 10/10/95 Verderber 5 5 7 6 G.C 4 1 1 5 7 2 9 11/28/95 Mann 320 21 G.D Δ 1 Kipke et al. 5 8 01/30/96 433 37 6 2 G.E 7 6 4 05/28/96 250 492.1 G.F 5 5 2 3 9 2 Kennedy et al. 06/25/96 3 0 2 Shikano et al. G.G 5 5 6 3 372 43 5 7/1996 G.H 5 3 5 2 3 0 Abe 04/01/97 G.I 5 6 6 4 Cipolla 1 1 1 5 6 1 4 9 2 4/1997 Beach et al. 385 33 G.J G.K 5 6 3 4 7 1 1 6/1997 Kennedy et al. 362 119 FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS TRANSLATION **PUBLICATION COUNTRY OR** DOCUMENT SUBCLASS **CLASS** (YES/NO) PATENT OFFICE NUMBER DATE No 1994 G.L JP 6-30275 Japan JP 8-141001 1996 Japan Yes G.M JP 8-194786 1997 Japan Yes G.N 1997 Yes G.O JP 9-10238 Japan G.P WO 00/13608 03/16/00 International A61C 19/00 N/A 5/06 N/A G.Q WO 00/14012 03/01/01 International A61N OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) LumiLeds Lighting LLC, Application Note 1149-5, Secondary Optics Design Considerations for Super Flux LEDs, Copyright G.R © 2000 LumiLeds Lighting, Obsoletes Publication No. 5968-1215E, Publication No. AN06 (3/O0) G.S Luxeon Dental Technical Data, Power Light Source, April, 2002 MacDougald et al., U.S. Patent Application Publication No. US 2003/0015667 A1, Pub. Date: Jan. 23, 2003 G.T **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered.

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**SUBSTITUTE FORM PTO-1449** U.S. DEPARTMENT OF COMMERCE ATTY. DOCKET NO. SERIAL NO. 10/656,490 PATENT AND TRADEMARK OFFICE DEME/10C (MODIFIED) **APPLICANT** INFORMATION DISCLOSURE STATEMENT BY APPLICANT Kovac et al. **GROUP** (Use several sheets if necessary) **FILING DATE** September 5, 2003 3732 (37 CFR 1.98(b)) **U.S. PATENT DOCUMENTS** FILING DATE ISSUE EXAMINER IF APPROPRIATE **CLASS SUBCLASS** INITIAL PATENT NUMBER DATE PATENTEE 09/26/00 3 Eggler et al. J.A 6 5 5 8 2 12/05/00 Nagel J.B 1 3 5 9 0 5 12/12/00 Herold et al. J.C 6 1 0 J.D 6 1 6 1 9 3 7 12/19/00 Rosenstatter 4 01/02/01 Narusawa et al. 6 6 8 3 J.E 1 O 5 01/09/01 Sarmadi J.F 6 1 02/1301 8 6 7 8 Trushkowsky 6 6 J.G 1 3 5 02/27/01 9 0 Tsimerman J.H 6 1 3/13/01 433 29 J.I 6 2 0 0 3 4 Kovac, et al. 7 2 03/27/Q1 J.J 6 0 8 8 8 Nosov 04/24/01 J.K 6 2 2 0 7 2 2 Begemann FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS TRANSLATION DOCUMENT **PUBLICATION COUNTRY OR** PATENT OFFICE **CLASS** SUBCLASS (YES/NO) DATE NUMBER 3/00 N/A WO 01/24724 04/12/01 International A61C J.L 08/02/01 International **A61N** 5/06 N/A J.M WO 01/54770 08/23/01 International A61C 13/15 Abstract only J.N WO 01/60280 J.O WO 01/64129 09/07/01 International S61C 19/00 N/A 6/00 N/A J.P WO 01/68035 09/20/01 International A61K H01L 31/12 N/A 09/20/O1 J.Q WO 01/69691 International OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) Tarle, Z. et al., The Effect of the Photopolymerization Method on the Quality of Composite Resin Samples, J. of Oral Rehab. J.R 25: 436-442, 1998 J.S TIR Technologies, Inc., Miniaturized TIR lenses for Light Emitting Diodes, TIR Technical Publication, pgs. 1-14 Uno, Shigeru and Asmussen, Erik, Marginal Adaptation of a Restorative Resin Polymerized at Reduced Rate, Scand J. J.T Dent. Res. 1991; 99: 440-4 **EXAMINER** DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered.

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О.М	WO 98/O4317	02/O5/98	International	A61N	1/30	N/A
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